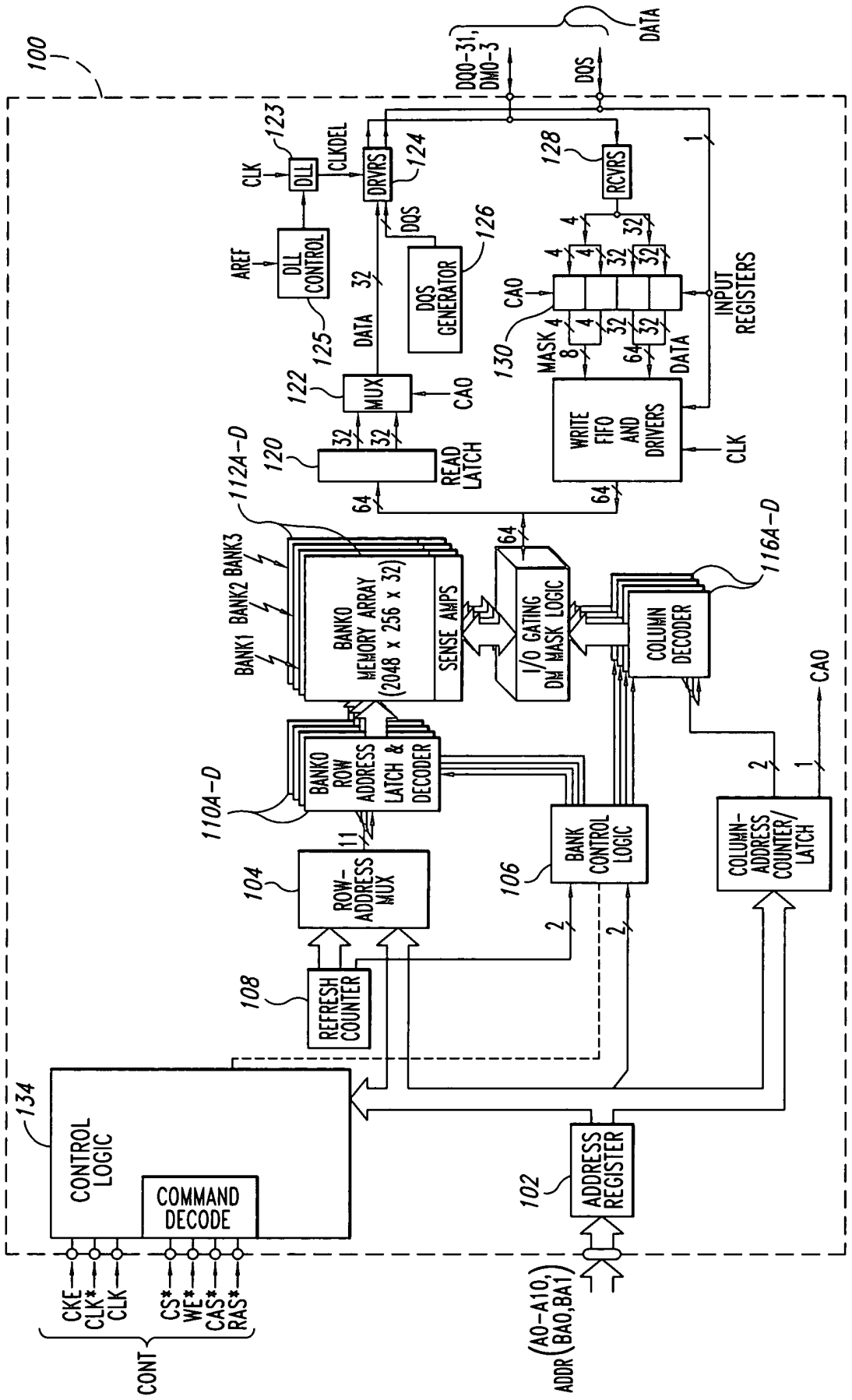
100
DQ0-31, DM0-3
DQS
DATA
123
CLK
DLL
CLKDEL
DRVRS
124
128
RCVRS
AREF
DLL CONTROL
DQS
126
DQS GENERATOR
CA0
INPUT REGISTERS
125
DATA
122
MUX
MASK
130
WRITE FIFO AND DRIVERS
CLK
120
READ LATCH
112A-D
BANK3
BANK2
BANK1
BANK0 MEMORY ARRAY (2048 x 256 x 32)
SENSE AMPS
I/O GATING DM MASK LOGIC
116A-D
COLUMN DECODER
110A-D
BANK0 ROW ADDRESS LATCH & DECODER
104
ROW-ADDRESS MUX
106
BANK CONTROL LOGIC
COLUMN-ADDRESS COUNTER/ LATCH
108
REFRESH COUNTER
134
CONTROL LOGIC
COMMAND DECODE
102
ADDRESS REGISTER
CKE
CLK*
CLK
CS*
WE*
CAS*
RAS*
CONT
(A0-A10, BA0,BA1)
ADDR

Fig. 1

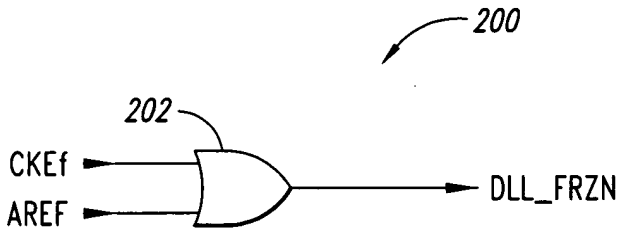
200
202
CKEf
AREF
DLL_FRZN

Fig. 2

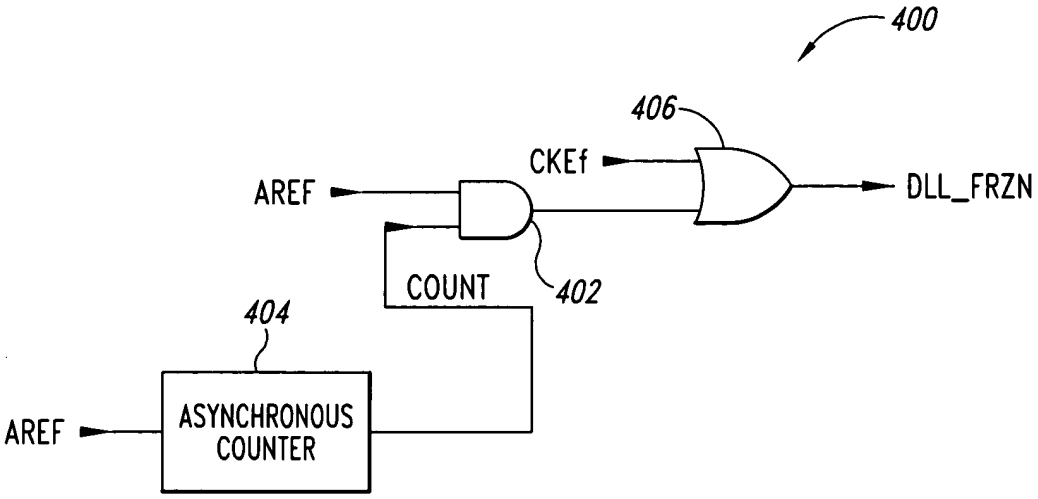
400
406
CKEf
AREF
DLL_FRZN
COUNT
402
404
AREF
ASYNCHRONOUS COUNTER

Fig. 4

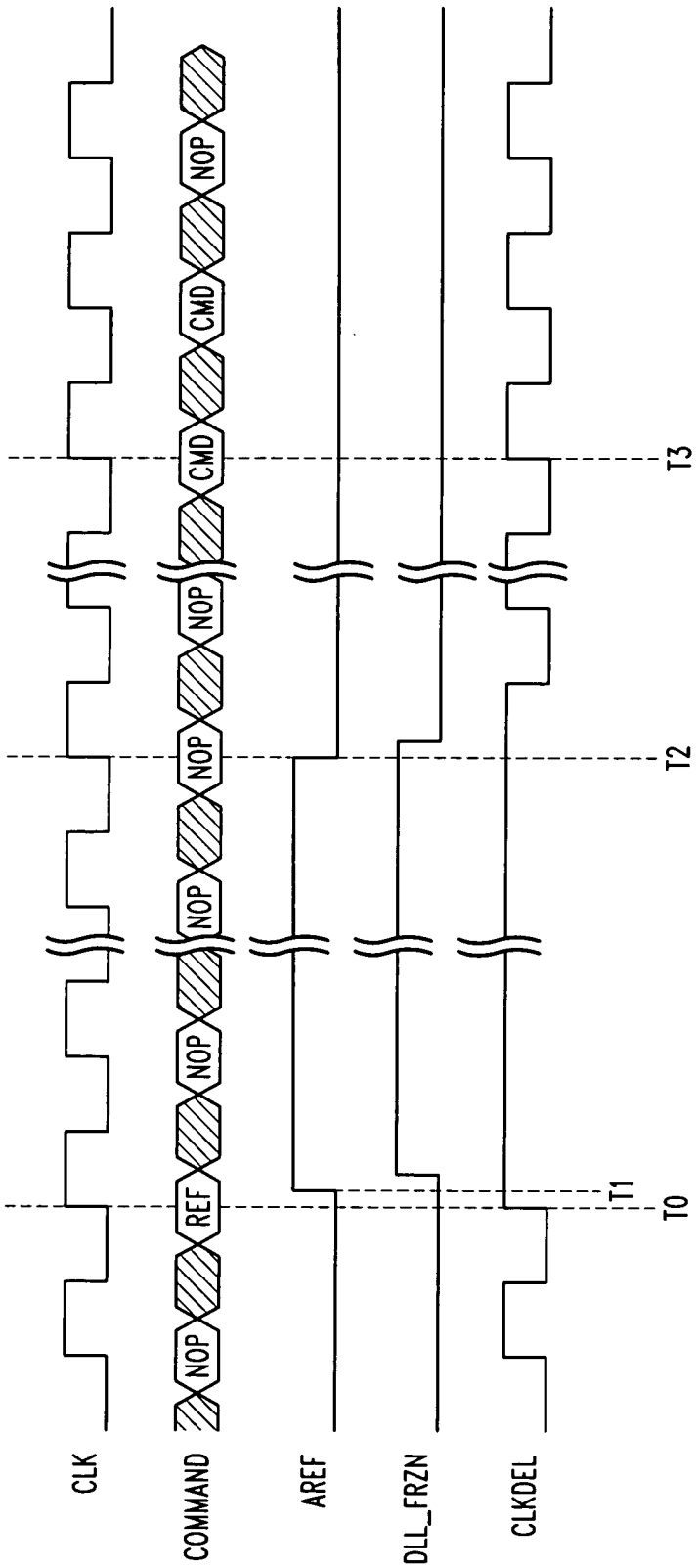
CLK
COMMAND
AREF
DLL_FRZN
CLKDEL
NOP
REF
NOP
NOP
NOP
NOP
CMD
CMD
NOP
T0
T1
T2
T3

Fig. 3

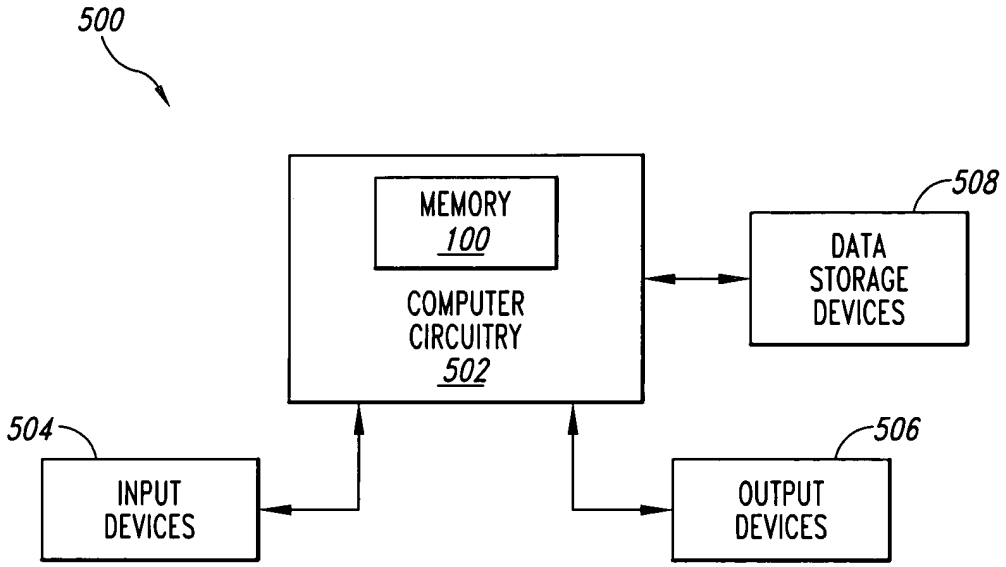
500
MEMORY
100
COMPUTER
CIRCUITRY
502
508
DATA
STORAGE
DEVICES
504
INPUT
DEVICES
506
OUTPUT
DEVICES

Fig. 5